|  |
| --- |
| **Performing a t-test for One Mean**  t\_test(x = <NAME OF DATASET>,  response = <NAME OF VARIABLE>,  conf\_int = TRUE,  conf\_level = 0.90,  alternative = "two-sided",  mu = <VALUE OF NULL HYPOTHESIS FOR MU>)  ***Note:*** If you want a 95% confidence interval, you change conf\_level to 0.95  ***Note:*** If you are doing a one-sided hypothesis test, you change alternative to either “greater” or “less” |
| **Obtaining 1000 Bootstrap Means**  bootstrap <- <NAME OF DATASET> %>%  specify(response = <NAME OF VARIABLE>) %>%  generate(reps = 1000, type = "bootstrap") %>%  calculate(stat = "mean") |
| **Plotting the Bootstrap Distribution**  visualize(data = bootstrap,  method = “simulation”)  ***Note:*** *This step* ***must*** *come after you have obtained the bootstrap means!* |
| **Obtaining the Sample Mean**  obs\_mean <- <NAME OF DATASET> %>%  specify(response = <NAME OF VARIABLE>) %>%  calculate(stat = "mean")  ***Note:*** *This step* ***must*** *be done* ***before*** *you find your confidence interval!* |
| **Obtaining a Confidence Interval from a Bootstrap Distribution**  get\_confidence\_interval(x = bootstrap,  level = 0.95,  type = “percentile”,  point\_estimate = obs\_mean)  ***Note:*** *This step* ***must*** *come after you have obtained the bootstrap means* ***and*** *the observed mean!*  ***Note:*** If you want a 90% confidence interval, you change level to 0.90 |
| **Scatterplot**  ggplot(data = <NAME OF DATASET>,  mapping = aes(x = <NAME OF X-VARIABLE>,   y = <NAME OF Y-VARIABLE>)  ) +  geom\_point() +  labs(x = "<TITLE FOR THE X-AXIS>",  y = “<TITLE FOR THE Y-AXIS>”) |
| **Scatterplot with Regression Line**  ggplot(data = <NAME OF DATASET>,  mapping = aes(x = <NAME OF X-VARIABLE>,   y = <NAME OF Y-VARIABLE>)  ) +  geom\_point() +  geom\_smooth(method = “lm”) +  labs(x = "<TITLE FOR THE X-AXIS>",  y = “<TITLE FOR THE Y-AXIS>”) |
| **Fitting a Linear Regression**  model <- lm(<NAME OF Y-VARIABLE> ~ <NAME OF X-VARIABLE>,  data = <NAME OF DATASET>)  ***Note:*** The **~** is necessary! It has to be there! |
| **Obtaining Coefficient Table**  get\_regression\_table(model,  conf.level = 0.95)  ***Note:*** You need to have fit the linear regression **before** this step!  ***Note:*** If you want a 90% confidence interval, you change conf.level to 0.90 |
| **Obtaining 1000 Bootstrap Slopes**  bootstrap <- <NAME OF DATASET> %>%  specify(response = <NAME OF Y-VARIABLE>,  explanatory = <NAME OF X-VARIABLE>) %>%  generate(reps = 1000, type = "bootstrap") %>%  calculate(stat = "slope") |

|  |
| --- |
| **Plotting the Bootstrap Distribution**  visualize(data = bootstrap,  method = “simulation”)  ***Note:*** *This is* ***the same*** *as plotting the bootstrap for one mean!* |
| **Obtaining the Sample Slope**  obs\_mean <- <NAME OF DATASET> %>%  specify(response = <NAME OF Y-VARIABLE>,  explanatory = <NAME OF X-VARIABLE>) %>%  calculate(stat = "mean")  ***Note:*** *This step* ***must*** *be done* ***before*** *you find your confidence interval!* |
| **Obtaining a Confidence Interval from a Bootstrap Distribution**  get\_confidence\_interval(x = bootstrap,  level = 0.95,  type = “percentile”,  point\_estimate = obs\_mean)  ***Note:*** *This is* ***the same*** *as how you found a confidence interval for one mean!* |